


FORM PTO-1390 (REV. 9-2001)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER 2406400-2	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371				U.S. APPLICATION NO. (if known, see 37 CFR 1.5)	
				10/070528	
INTERNATIONAL APPLICATION NO. PCT/EP00/08704		INTERNATIONAL FILING DATE 06 September 2000 (06/09/00)		PRIORITY DATE CLAIMED 06 September 1999 (06/09/99)	
TITLE OF INVENTION METHOD AND DEVICE FOR MONITORING AND CONTROLLING THE OPERATIONAL PERFORMANCE					
APPLICANT(S) FOR DO/EO/US PLANKI, Peter et al.					
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:					
<p>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.</p> <p>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.</p> <p>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</p> <p>4. <input type="checkbox"/> The US has been elected by the expiration of 19 months from the priority date (Article 31).</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))</p> <p>a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</p> <p>b. <input type="checkbox"/> has been communicated by the International Bureau.</p> <p>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</p> <p>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).</p> <p>a. <input type="checkbox"/> is attached hereto.</p> <p>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</p> <p>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))</p> <p>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</p> <p>b. <input type="checkbox"/> have been communicated by the International Bureau.</p> <p>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</p> <p>d. <input type="checkbox"/> have not been made and will not be made.</p> <p>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).</p> <p>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</p> <p>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p> <p>Items 11 to 20 below concern document(s) or information included:</p> <p>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</p> <p>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</p> <p>13. <input type="checkbox"/> A FIRST preliminary amendment.</p> <p>14. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.</p> <p>15. <input type="checkbox"/> A substitute specification.</p> <p>16. <input type="checkbox"/> A change of power of attorney and/or address letter.</p> <p>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.</p> <p>18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4).</p> <p>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</p> <p>20. <input checked="" type="checkbox"/> Other items or information:</p>					
<p>INTERNATIONAL SEARCH REPORT (ENGLISH AND GERMAN VERSIONS)</p>					

EXPRESS MAIL LABEL NO.
EV 000 475 706 US

U.S. APPLICATION NO. (if known, see 37 CFR 1.5) 10/070528		INTERNATIONAL APPLICATION NO. PCT/EP00/08704		ATTORNEY'S DOCKET NUMBER 2406400-2	
21. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)): Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1040.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$890.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$740.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$710.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 ENTER APPROPRIATE BASIC FEE AMOUNT =				CALCULATIONS PTO USE ONLY	
				\$ 890.00	
				\$	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$	
Total claims	8 - 20 =	0	x \$18.00	\$	
Independent claims	2 - 3 =		x \$84.00	\$	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)				+ \$280.00	
				\$ \$280.00	
TOTAL OF ABOVE CALCULATIONS =				\$ \$1,170.00	
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.				+	
SUBTOTAL =				\$ \$585.00	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$	
TOTAL NATIONAL FEE =				\$	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +				\$	
TOTAL FEES ENCLOSED =				\$ \$585.00	
				Amount to be refunded:	\$
				charged:	\$
a. <input checked="" type="checkbox"/> A check in the amount of \$ <u>\$585.00</u> to cover the above fees is enclosed. b. <input type="checkbox"/> Please charge my Deposit Account No. <u>500-354</u> in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>500-354</u> . A duplicate copy of this sheet is enclosed. d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.					
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO: Richard P. Stitt, Esq. Intellectual Property Group Spencer Fane Britt & Browne LLP 1000 Walnut St., Ste. 1400 Kansas City, MO 64106-2140 Telephone: 1-800-526-6529 Facsimile: 1-816-474-3216					
				 SIGNATURE	
				Richard P. Stitt NAME	
				35,693 REGISTRATION NUMBER	

4 pito

1007 10/10 70558

10 Rev 10/10 70558 03 APR 2002

METHOD AND DEVICE FOR MONITORING AND CONTROLLING
THE OPERATIONAL PERFORMANCE OF A COMPUTER
OR PROCESSOR SYSTEM

5 The present invention relates to a method and device for monitoring and controlling the operational performance of a computer or processor system and a device for accomplishing this method.

10 Serviceability and operational reliability of components, assembly groups, devices and hence a computer or processor system as a whole is only protected within certain tolerance zones of physical values in their environment. These physical values are particularly temperature, but also air humidity, air flow, freedom of dust and percussions. Depending upon the field of application of the system to be monitored, brightness oscillations, chemical pollutions or other variables may also be of importance. If one or
15 more of these values lie beyond the predetermined tolerance zones, this may lead to interferences of the performance of the respective component, but also to a complete failure thereof. At worst, the failure of one individual component may lead to a collapse of the complete system.

20 Particularly in case of larger computer or processor systems, as for example mainframe computers or multiprocessor systems a continuous and faultless operation is of great importance and in particular as calculations on these devices often run over a very long period of time so that a failure of the system at a certain time probably ruins the work of several days. For this reason, temperature monitoring systems are known
25 measuring the temperature at individual components of the system and when detecting an inadmissibly increased temperature switch off the respective component, for example, or – in case of a processor – effect a decrease of performance by means of reducing the clock frequency. In particularly critical cases a controlled shutdown of the complete system is effected.

30

 It is the main object of the hitherto known monitoring systems to avoid a sudden collapse of the complete system due to a previous shutdown of individual components or the controlled shutdown of the system. This may avoid the loss of data, but often leads to

Contrary to the hitherto known solutions for monitoring computer or processor systems the inventive method guarantees the continuation of the serviceability of the system with highest possible efficiency and simultaneous protection of the active computing processes. This is due to the fact that the individual components are monitored independently of each other by measuring sensors and that when predetermined limit values are reached a complete shutdown of the complete system and hence an interruption of the running programs does not have to be effected necessarily. Quite to the contrary, if justifiable, the individual components, assembly groups or devices are switched off individually or reduced in their performance, whereby the system as a whole, however, remains operable. Thereby, the predetermined reaction patterns allow a fault-adequate reaction as well as specific monitoring and selecting of the individual components.

It is also an advantage of the present invention that in contrast to the hitherto known monitoring systems this system enables a complete monitoring of potential interferences within and outside the computer or processor system and not only a monitoring of the temperature. Thus, the interferences of too high air humidity, too low air flow, of dust or percussions may also be detected and taken into account. Further, the inventive method may be applied independent of buses and hence of producers in all kinds of systems, guaranteeing the highest possible amount of flexibility. This refers to already existing systems or computer or processor systems to be still produced.

According to an embodiment of the present invention the detected operational parameters or environmental parameters are not absolutely measured values but also temporal changes of these measured values. This offers the possibility to meet appropriate countermeasures. Thus, a very rapid temperature rise of a monitored component leads to another reaction than a merely moderate rise. It may furthermore be provided that besides the transmission of the control command corresponding to a selected reaction also a corresponding information signal is to be issued in an optical or acoustic form, in order to inform a service staff as soon as possible of place and reason of the fault. This information signal may also be the transmission of a SMS-message.

operation. Besides said first sensors second sensors are provided for detecting parameters in the environment of said mainframe computer 1, as for example sensors for detecting chemical pollutions of the air, dust or smoke, air humidity or in certain cases also of ionising radiation. These sensors may particularly be temperature sensors. The measured values detected by said second sensors are also transmitted via respective lines 6 to said monitoring device 2.

The operational and environmental parameters detected by said first and second sensors 3 and 5 first of all are being processed in a monitoring unit 7 of said monitoring device 2, whereby the detected values are compared to limit values, which are listed in a first memory 8. Thereby, it is not necessary to provide only one single limit value for each monitored value. Moreover, preferably several limit values, a lower, a mean as well as an upper limit value are provided so that it is possible to react specifically to the occurrence of a fault. When exceeding the lower limit value, for example, only a slight change of the operational performance of the computer system is necessary, whereas when the upper limit value is exceeded, this leads to a shutdown of the respective component or possibly even of the complete system.

If one or more of the limit values stored in said first memory 8 are exceeded or fallen below of, this is detected by said monitoring unit 7 and a corresponding operational event message is generated on basis of exceeding or falling below of the limit values, which then is communicated to said control unit 9. This operational event message informs about kind and extent of the fault. In the following the control unit 9 selects one control command corresponding to the operational event message from a number of predetermined reaction patterns contained in a second memory 10, and transmits said control command to the mainframe computer 1. This control command contains instructions for altering the operational performance and for example may be the instruction to shut down individual components or put them into a sleep modus or to reduce the capacity of the system. Furthermore, also the command to shut down the complete system may be transmitted. Thereby, the reaction patterns are chosen such that the mainframe computer 1 and the programs running thereon may still continue under the new operational conditions predetermined by said reaction patterns, if this is justifiable.

10

20

30

35

being exceeded or fallen below of. Furthermore, the example shown in Figures 2 to 4 not only refers to the absolute temperature value but also to the course of time.

In Fig. 2, for example, a moderate temperature increase is detected for the monitored time, during the course of which merely the lower limit value is exceeded. Thus, if the lower limit is exceeded, first only the performance of the monitored processor is reduced, for example by reducing the clock frequency. As an alternative, however, also the performance of a respective refrigerating set may be increased. If these measures are successful, the system may be continued to be operated in this mode until the service staff arrives, who has been informed by a message transmitted simultaneously by means of the respective control command. A shutdown of the component or of the complete system is not necessary in this case.

In case of a faster temperature rise, as for example shown in Fig. 3, the afore described measures do not lead to success and in the course of time also the other two limit values are exceeded. When the upper limit value is exceeded, at the latest a shutdown of the monitored processor has become necessary. If, due thereto, the temperature falls below the predetermined limit values again, the complete system may be continued to be operated with shutdown processor until the arrival of the service staff. If, however, the shutdown of the processor does not lead to a temperature decrease either – for example within a predetermined time limit – it is safer to run down the complete system by means of the shutdown procedure, in order to store the already existing data.

An abrupt temperature rise, as shown in Fig. 4, however, is indicative of an extraordinary fault demanding the immediate shutdown of the complete system in any case. Due to the severe temperature rise the exceeding of further limit values it is not to be waited for, but the shutdown is to be initiated immediately.

The consideration of a time variations of a monitored parameter may, for example, also be effected by a separate sensor, exclusively detecting the variations of the monitored values. There is another possibility in detecting the time points at which certain limit values are exceeded or fallen below of and, on basis thereof, drawing a conclusion concerning the time behaviour.

TABLE: REACTION PATTERNS

Measured values	Place of measurement	Reaction pattern (exemplary)
1. temperature	a) at the individual component or at a device b) at the air inlet c) outside computer housing in the room d) external, e.g. adjacent rooms fire-alarm etc.	e) GW: shutdown of the individual component, the device (sleepmodus) f) IGW: reduce system performance mGW: switch off ventilator uGW: controlled system shutdown g) same as b) h) fixed to local facts
2. air humidity	a) at the individual component or at a device b) at the air inlet c) outside computer housing in the room	d) GW: shutdown of the individual component, the device (sleepmodus) e) IGW: reduce system performance mGW: switch off ventilator uGW: controlled system shutdown f) same as b)
3. percussion (acceleration of frequency)	a) at the individual component or at a device b) at the computer housing	c) GW: shutdown of the individual component, the device (sleepmodus) d) IGW: rotating devices (e.g. hard disks) shutdown uGW: controlled system shutdown
4. air flow	a) at the individual component or at a device b) at the air outlet	c) GW: shutdown of the individual component, the device (sleepmodus) d) IGW: reduce system performance uGW: controlled system shutdown
5. dust, smoke, aerosol (e.g. optoelectrical measurement)	a) at the air inlet b) outside computer housing in the room	c) IGW: reduce system performance mGW: switch off ventilator uGW: controlled system shutdown d) same as a)
6. chemical pollution of the air (e.g. electrical conductivity of the air, ph-value)	a) at the individual component or at a device b) at the air inlet c) outside computer housing in the room	d) GW: shutdown of the individual component, the device e) IGW: reduce system performance mGW: switch off ventilator f) uGW: controlled system shutdown g) same as b)

7. electro-magnetic-field	a) at the individual component or at a device b) outside computer housing in the room	c) GW: shutdown of the individual component, the device d) IGW: reduce system performance uGW: controlled system shutdown
8. voltage oscillation	a) at the individual component or at a device b) main voltage	c) GW: shutdown of the individual component, the device d) (in case of no UPS:) IGW: reduce system performance uGW: controlled system shutdown
9. brightness oscillation (optoelectronic)	a) at the individual component or at a device	b) (relevant for optoelectronic components) GW: shutdown of the individual component, the device
10. ionised radiation (X-ray radiation, radio-active radiation)	a) at the individual component or at a device b) outside computer housing in the room	c) GW: shutdown of the individual component, the device d) IGW: reduce system performance uGW: controlled system shutdown
11. further measurements to be defined	./.	./.

GW=limit value IGW = lower limit value mGW=mean limit value uGW=upper limit value

5

Thereby, the monitoring of temperature is not only possible at the individual components but for example also at an air intake channel of the system, outside the system, in a room and in adjacent rooms. A change of temperature at the air intake channel may, for example, result in a change of the behaviour of the ventilator, as may be seen from the table.

10

Another parameter which is essential for the operational behaviour is the air humidity, which again may be detected at the element itself but also at the air intake channel or outside in the room. Here, an increased air humidity at the air intake channel may lead to the fact that first the system performance is reduced or the ventilator is switched off. Only as the upper limit value is exceeded, the system has to be shut down in a controlled manner for safety reasons.

15

Percussions occurring inside or outside the system may also be monitored and therefore rotating elements like disk drives could be shut down, if justifiable.

20

5 **Claims**

1. Method for monitoring and controlling the operational performance of a
a computer or processor system (1) comprising the following steps:
(a) detecting operational parameters of individual components as well as of
10 environmental components of the computer or processor system (1);
(b) comparing the detected operational parameters and environmental parameters
with
predetermined limit values;
(c) determining, if predetermined limit values are exceeded or fallen below of by
15 one or
several of said detected operational parameters and environmental
parameters;
(d) determining an operational event on basis of said limit values that have
been exceeded or fallen below of;
20 (e) selecting a reaction corresponding to said determined operational event from
a number of predetermined reaction patterns; and
(f) transmitting a control command to alter the operational performance
corresponding to said selected reaction to said computer or processor system
(1).
25
2. Method of claim 1,
characterized in
that the detected operational parameters or environmental parameters are
absolute measured values as well as the temporal change of said measured
30 value.
3. Method of one of the preceding claims,
characterized in
that besides the transmission of the control command corresponding to the
35 selected reaction also a corresponding information signal is transmitted.
4. A device for monitoring and controlling the operational performance of a
computer or processor system (1), comprising:

first sensors (3) for detecting operational parameters of individual components of said computer or processor system (1),

second sensors (5) for detecting environmental parameters of said computer or processor system (1),

a monitoring unit (7) for comparing said detected operational and environmental parameters with limit values stored in a first storage (8) as well as for detecting, if one or several limit values are being exceeded or fallen below of,

means for generating a determined operational event message on basis of said limit values that have been exceeded or fallen below of, and

a control unit (9) for receiving said operational event message as well as for selecting and transmitting a control command corresponding to said operational event message to said computer and processor system (1) from a storage (10) containing a number of predetermined reaction patterns.

5. Device of claim 4,

characterized in

that said detected operational parameters or environmental parameters are absolute measured values as well as the temporal changes of said measured value.

6. Device of claim 4 or 5,

characterized in

that said device further comprises an optical or acoustic output means for outputting a message corresponding to said operational event message and/or said transmitted control command.

7. Device of one of claims 4 to 6,

characterized in

that said device comprises a transmission means (15) for transmitting a message corresponding to said operational event message and/or to said transmitted control command.

8. Device of one of claims 4 to 7,

characterized in

that said device is part of a computer which is separate from the computer or processor system (1) to be monitored.

Summary

In order to monitor and control the operational performance of a computer system or processor system (1), operational parameters of individual components as well as environmental parameters of the computer system or processor system (1) are detected. Said parameters are compared with predetermined limit values. If it is determined that one or more of the detected operational parameters and environmental parameters have exceeded or fallen below of the predetermined limit values, an operational event is determined based on the limit values that have been exceeded or fallen below of. A reaction is selected from a number of predetermined reaction patterns according to the determined operational event, and a control command which corresponds to this reaction and which is provided for altering the operational performance is transmitted to the computer to be monitored. This enables an early detection of the occurrence of faults as well as the initiation of an appropriate measure.

(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES
PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

(19) Weltorganisation für geistiges Eigentum
Internationales Büro



(43) Internationales Veröffentlichungsdatum
15. März 2001 (15.03.2001)

PCT

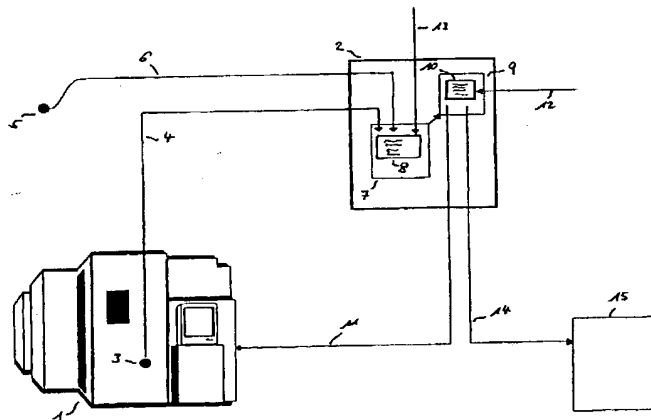
(10) Internationale Veröffentlichungsnummer
WO 01/18632 A2

- (51) Internationale Patentklassifikation⁷: G06F 1/00 (71) Anmelder und
(72) Erfinder: PLANKI, Peter [DE/DE]; Rosenstr.4, 82205
(21) Internationales Aktenzeichen: PCT/EP00/08704 Gilching (DE). LETTMAIR, Karl-Heinz [DE/DE];
Sportplatzstr. 26, 86932 Stoffen (DE).
(22) Internationales Anmeldedatum: 6. September 2000 (06.09.2000) (74) Anwalt: SCHULZ, Rütger; Mitscherlich & Partner, Son-
nenstrasse 33, 80331 München (DE).
(25) Einreichungssprache: Deutsch (81) Bestimmungsstaaten (national): AE, AG, AL, AM, AT,
AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU,
(26) Veröffentlichungssprache: Deutsch CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,
(30) Angaben zur Priorität: 199 42 430.6 6. September 1999 (06.09.1999) DE MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL,
TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
(71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme (84) Bestimmungsstaaten (regional): ARIPO-Patent (GH,
von US): SPERLING, Axel [DE/DE]; Evastr. 4a, 81927 GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), eura-
München (DE). sisches Patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Fortsetzung auf der nächsten Seite]

(54) Title: METHOD AND DEVICE FOR MONITORING AND CONTROLLING THE OPERATIONAL PERFORMANCE OF
A COMPUTER SYSTEM OR PROCESSOR SYSTEM

(54) Bezeichnung: VERFAHREN BZW. VORRICHTUNG ZUR ÜBERWACHUNG UND STEUERUNG DES BETRIEBSVER-
HALTENS EINES COMPUTER- ODER PROZESSORSYSTEMS



(57) Abstract: In order to monitor and control the operational performance of a computer system or processor system (1), opera-
tional parameters of individual components as well as environmental parameters of the computer system or processor system (1) are
detected. Said parameters are compared with predetermined limit values. If it is determined that one or more of the detected opera-
tional parameters and environmental parameters have exceeded or fallen below of the predetermined limit values, an operational
event is determined based on the limit values that have been exceeded or fallen below of. A reaction is selected from a number of
predetermined reaction patterns according to the determined operational event, and a control command which corresponds to this
reaction and which is provided for altering the operational performance is transmitted to the computer to be monitored. This enables
an early detection of the occurrence of faults as well as the initiation of an appropriate measure.

[Fortsetzung auf der nächsten Seite]

WO 01/18632 A2

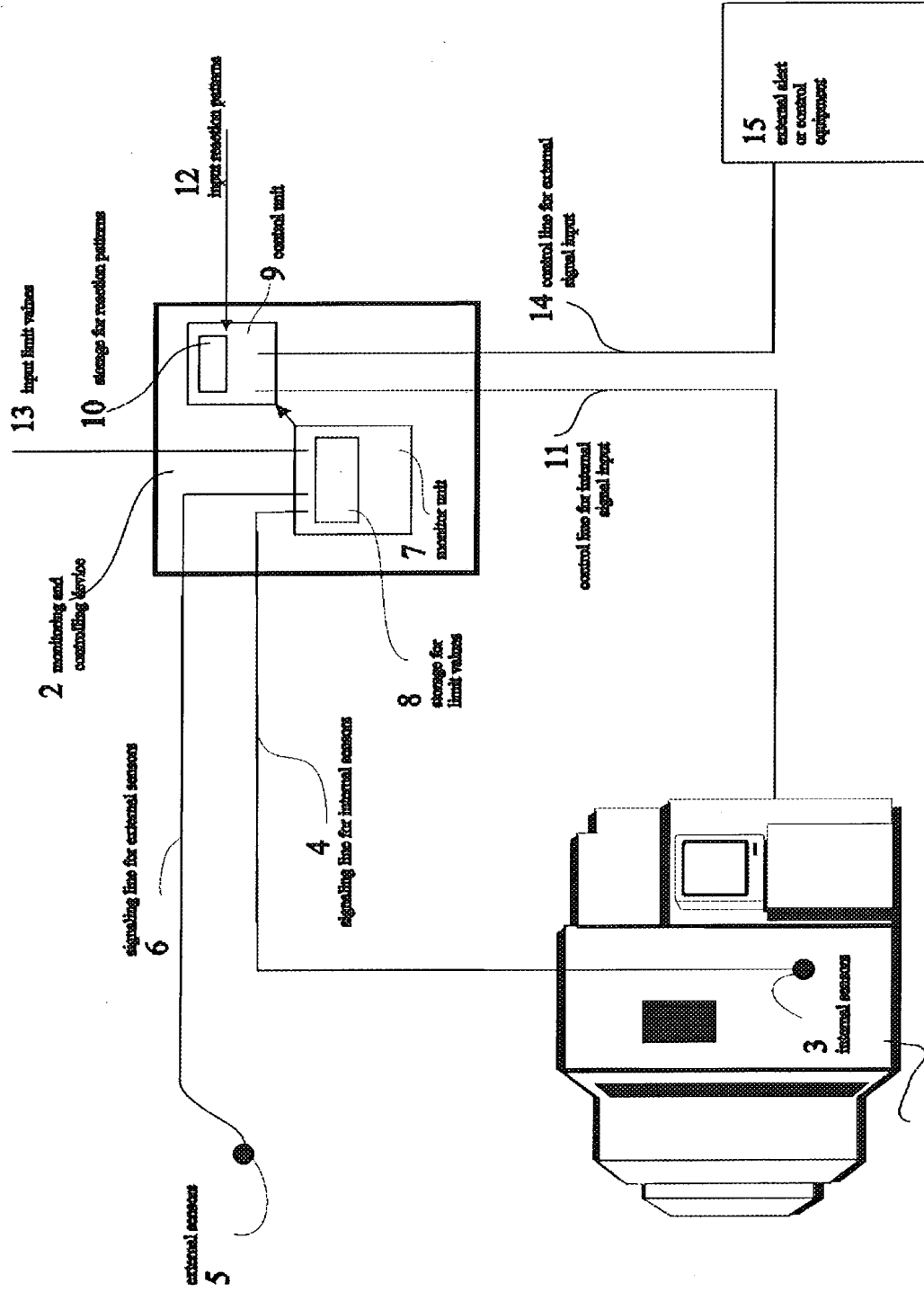


Fig. 1

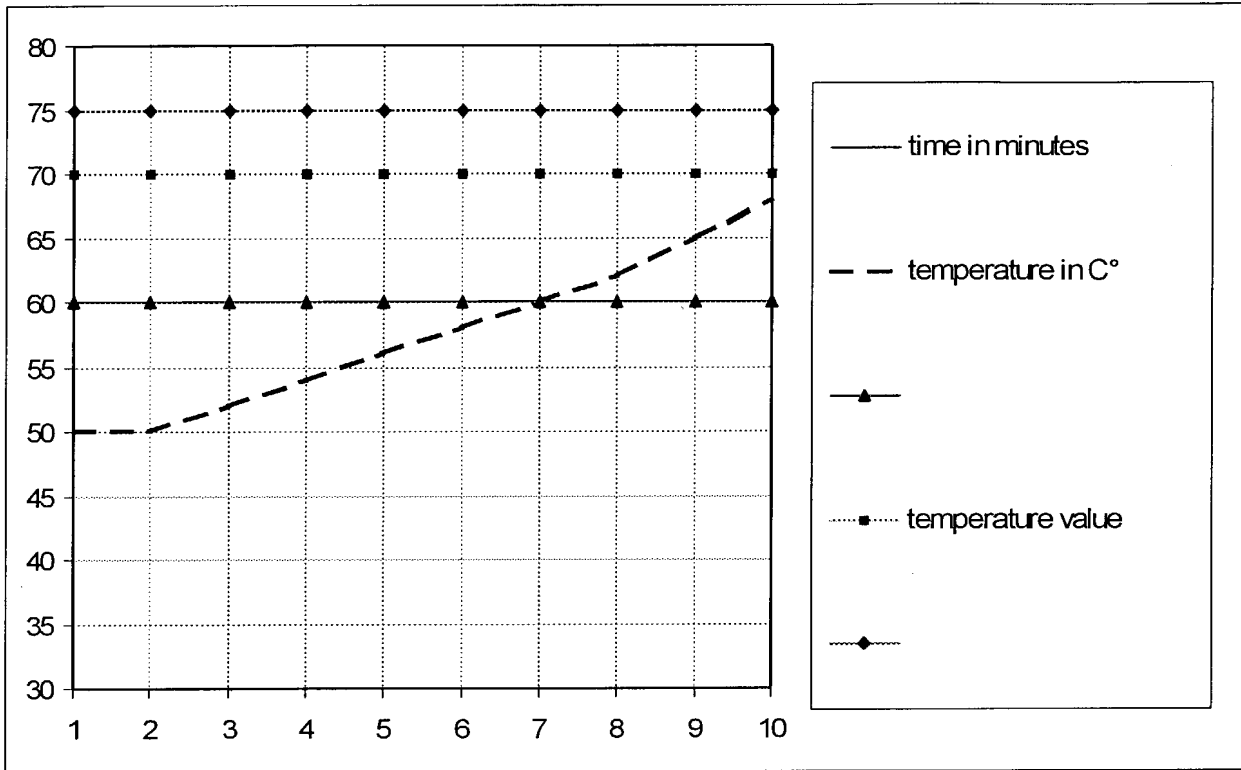


Fig. 2

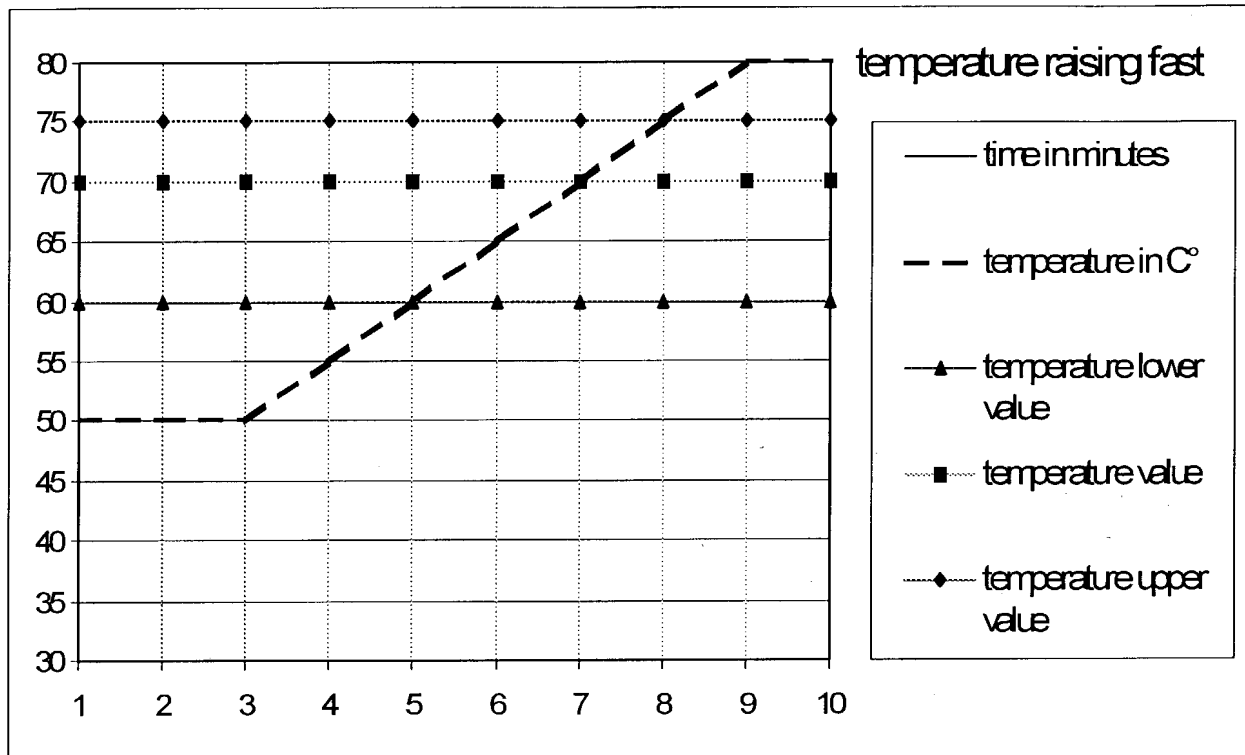


Fig. 3

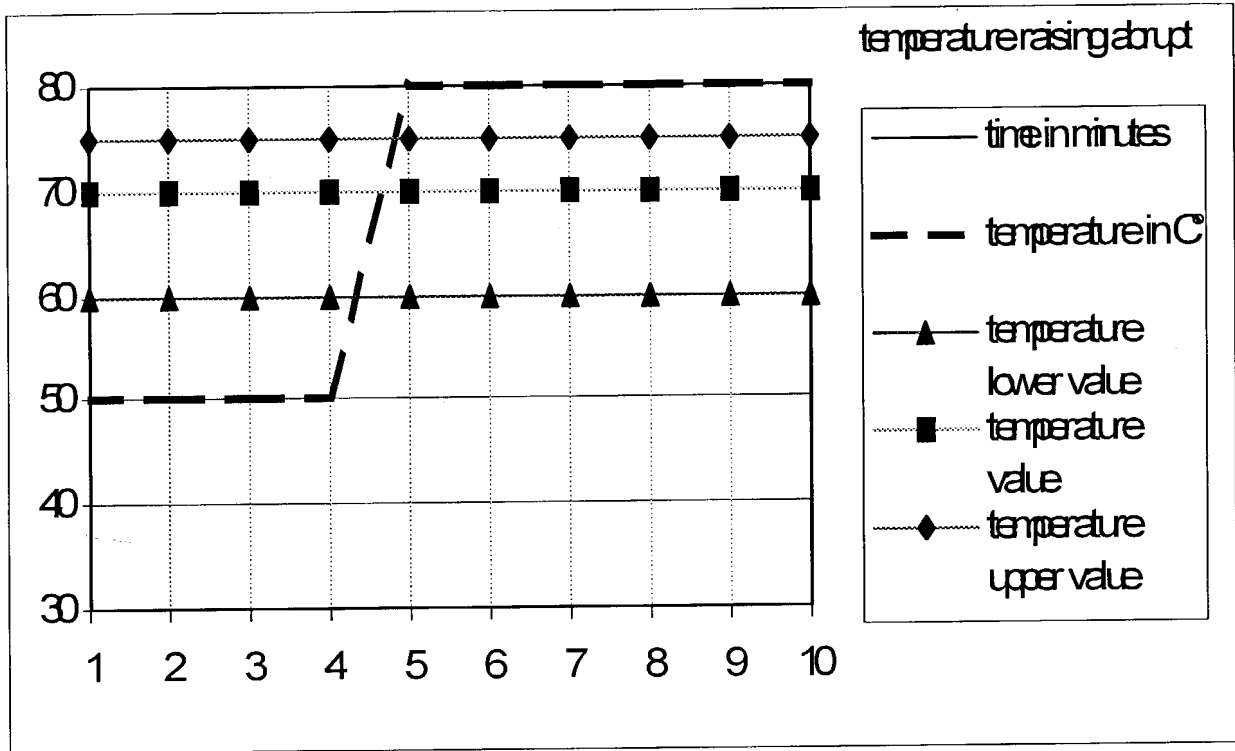


Fig. 4

Spencer Fane Britt & Browne, LLP
1000 Walnut Street, Suite 1400
Kansas City, MO 64106
1-816-474-8100

DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) <input type="checkbox"/> Declaration Submitted with Initial Filing <input checked="" type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)	Attorney Docket Number	5007546-1
	First Named Inventor	PLANKI, Peter
	COMPLETE IF KNOWN	
	Application Number	10 / 070,528
	Filing Date	03/06/2002
	Art Unit	
Examiner Name		

As the below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original and first inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Method and Device for Monitoring and Controlling the Optional Performance

the specification of which

☐ is attached hereto

OR

☒ was filed on (MM/DD/YYYY) 03/06/2002

as United States Application Number or PCT International

Application Number 10/070,528 and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
PCT/EP00P08704	EPO	06/09/2000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

(Page 1 of 2)

If this Declaration becomes separated from its file please contact the Spencer Fane IP Group at 816-292-8100

Spencer Fane Britt & Browne, LLP
1000 Walnut Street, Suite 1400
Kansas City, MO 64106
1-816-474-8100

DECLARATION — Utility or Design Patent Application

Direct all correspondence to: <input checked="" type="checkbox"/>		Customer Number or Bar Code Label <u>21129</u>		OR <input type="checkbox"/> Correspondence address below	
Name					
Address					
City		State		ZIP	
Country		Telephone		Fax	
<small>I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.</small>					
NAME OF SOLE OR FIRST INVENTOR :				<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any)) <u>Peter</u>		Family Name (last or Surname) <u>Plankl</u>			
Inventor's Signature <u>[Signature]</u>				Date	
Residence: City <u>Munich</u>		State		Germany <u>DEX</u> Country	German Citizenship
Mailing Address <u>Herzog-Heinrich-Strasse 25</u>					
City <u>Munich</u>		State		80336 ZIP	Germany Country
NAME OF SECOND INVENTOR :				<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any)) <u>Karl-Heinz</u>		Family Name (last or Surname) <u>Lettmaier</u>			
Inventor's Signature <u>[Signature]</u>				Date	
Residence: City		State		Germany <u>DEX</u> Country	German Citizenship
Mailing Address <u>Sportplatzstr. 26</u>					
City <u>Stoffen</u>		State		86932 ZIP	Germany Country
<input type="checkbox"/> Additional inventors are being named on the _____ supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto.					

[Page 2 of 2]

If this Declaration becomes separated from its file please contact the Spencer Fane IP Group at 816-292-8100

Please type a plus sign (+) inside this box → ☐

Spencer Fane Britt & Browne LLP
 1000 Walnut Street, Suite 1400
 Kansas City, MO 64106
 1-816-474-8100

POWER OF ATTORNEY OR AUTHORIZATION OF AGENT

Application Number	10/070,528
Filing Date	03/06/2002
First Named Inventor	PLANKI, Peter
Title	Method and Device for Monitoring
Group Art Unit	
Examiner Name	
Attorney Docket Number	5007546-1

I hereby appoint:

☒ Practitioners at Customer Number

21129

Place Customer
 Number Bar Code
 Label here

☐ Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all
 business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Practitioners at Customer Number

Place Customer
 Number Bar Code
 Label here

☐ Firm or
 Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

I am the:

☐ Applicant/Inventor.

☐ Assignee of record of the entire interest. See 37 CFR 3.71.
 Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

SIGNATURE of Applicant or Assignee of Record

Name

Peter Planki

Signature

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple
 forms if more than one signature is required. see below.

☐ *Total of _____ forms are submitted.

If this paper becomes separated from its file please contact the Spencer Fane IP Group at 1-800-526-6529

Please type a plus sign (+) inside this box → ☐

Spencer Fane Britt & Browne LLP
1000 Walnut Street, Suite 1400
Kansas City, MO 64106
1-816-474-8100

**POWER OF ATTORNEY OR
AUTHORIZATION OF AGENT**

Application Number	10/070,528
Filing Date	03/06/2002
First Named Inventor	PLANKI, Peter
Title	Method and Device for Monitoring
Group Art Unit	
Examiner Name	
Attorney Docket Number	5007546-1

I hereby appoint:

☒ Practitioners at Customer Number

21129

Place Customer
Number Bar Code
Label here

OR

☐ Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Practitioners at Customer NumberPlace Customer
Number Bar Code
Label here

OR

☐ Firm or
Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

I am the:

☐ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).**SIGNATURE of Applicant or Assignee of Record**

Name

Karl-Heinz Lettmair

Signature

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required. See below.

☐ *Total of _____ forms are submitted.

If this paper becomes separated from its file please contact the Spencer Fane IP Group at 1-800-526-6529